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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/711,326

09/10/2004

Takahiro Nakano

SIC-04-034

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10/09/2007

DELAND LAW OFFICE

P.O. BOX 69

KLAMATH RIVER, CA 96050-0069

EXAMINER

IRVIN, THOMAS W

ART UNIT

PAPER NUMBER

3683

MAIL DATE

DELIVERY MODE

10/09/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/711,326

Applicant(s)

NAKANO ET AL.

Examiner

Thomas W. Irvin

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20040916, 20040910.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Drawings*

The drawings are objected to because Fig. 1 contains incorrect reference number 36 for the "cam lever". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

Claim 13 is objected to because of the following informalities: on line 11, "the rotational axis that is greater" should be reworded to read -- the rotational axis is greater --. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-10, 13, and 14 are rejected under 35 U.S.C. 102(a) as being anticipated by Kamada et al. (2004/0142783).

In Re claim 1, with respect to Figures 3(a)-(c), Kamada et al. discloses a bicycle sprocket comprising: a sprocket body (200); a plurality of teeth (220) extending radially outwardly from the sprocket body; a spline (236a) extending radially inwardly from the sprocket body; and wherein the spline includes a radially outer surface facing radially outward (242).

In Re claim 2, with respect to Fig. 3(b), Kamada et al. further discloses that the radially outer surface of the spline faces a radially inner surface of the sprocket body (radially inner surface of 204).

In Re claim 3 and 4, Kamada et al. further discloses that the radially inner surfaces are substantially straight and parallel to the rotational axis.

In Re claim 5, Kamada et al. further discloses that the sprocket body includes a first sidewall portion (210) and a second sidewall portion (208), and that the plurality of teeth extend radially outwardly from the first sidewall portion, and wherein the second sidewall portion is laterally offset from the first sidewall portion.

In Re claim 6, Kamada et al. further discloses that the second side wall portion overlaps the outer surface when viewed axially.

In Re claim 7, Kamada et al. further discloses that second side wall portion is spaced apart from the first side wall portion in a direction of the rotational axis.

In Re claim 8, Kamada et al. further discloses that the spline is offset from the first side wall portion in a direction of the rotational axis.

In Re claim 9, with respect to Fig. 3(b), Kamada et al. further discloses that the spline extends from the second side wall portion and terminates at a free end (224) and wherein the free end is spaced apart from a first sidewall (not labeled) of the first side wall portion that faces in a same direction as the free end. The first sidewall is understood to be the opposing side wall to the first side wall portion.

In Re claim 10, Kamada et al. further discloses that the sprocket has a side wall that includes a first and second side wall portion (210,208), wherein the plurality of teeth

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extend radially outwardly from the first side wall portion, and wherein the second side wall portion and the spline together form a composite spline.

In Re claim 13, with respect to Figures 3(a)-(c), Kamada et al. discloses a bicycle sprocket comprising: a sprocket body (200); a plurality of teeth (220) extending radially outwardly from the sprocket body dimensioned to engage a chain; a spline (224) extending radially inwardly from the sprocket body, wherein the spline has a root portion (not labeled) extending radially inwardly of the sprocket body and a radially inner portion (228) extending radially inwardly of the root portion; wherein a thickness of the radially inner portion of the spline in a direction parallel to the rotational axis is greater than a thickness of the root portion of the spline in a direction parallel to the rotational axis. The root portion is understood to be a part of a second side wall portion (208) which overlaps with and connects to the spline (224).

In Re claim 14, Kamada et al. further discloses that the sprocket body has a side wall that includes a first side wall portion (110), wherein the plurality of teeth extend radially outwardly from the first side wall portion. From the drawings, it appears that a thickness of the first side wall portion in a direction of the rotational axis is substantially equal to a thickness of the root portion of the spline in a direction of the rotational axis as broadly interpreted.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamada et al. (2004/0142783).

In Re claim 11, Kamada et al. fails to teach the specific thicknesses of the sprocket portions. However, from the drawings, it appears that a thickness of the spline in an axial direction is greater than a thickness of the second side wall portion in an axial direction. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the thickness of the spline greater than the thickness of the second sidewall portion because the spline absorbs the forces between the sprocket and the hub, and therefor needs to be more robust.

In Re claim 12, Kamada et al further discloses, from the drawings, that the thickness of the first side wall portion in an axial direction is substantially equal to the thickness of the second side wall portion in an axial direction as broadly interpreted.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

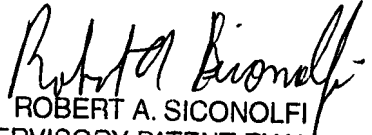
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas W. Irvin whose telephone number is (571) 270-3095. The examiner can normally be reached on Mon-Fri 8am-4pm, Alt Fri off (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TWI  
09/28/2007

 9/28/07  
ROBERT A. SICONOLFI  
SUPERVISORY PATENT EXAMINER